

APPLICANT(S): Rosenberg, et al.  
SERIAL NO.: 09/557,262  
FILED: April 24, 2000  
Page 2

**In the Claims:**

Please amend the following claims to read as follows:

1-60. Cancelled.

61. (Currently Amended) An isolated nucleic acid molecule comprising a nucleic acid sequence from coordinates 323 to 1255 of SEQ ID NO: 1, wherein said nucleic acid sequence encodes a polypeptide having 3-O-sulfotransferase activity ~~comprising nucleotides 323 to 1255 of SEQ ID NO: 1, or substitutions or variants thereof, wherein the nucleic acid nucleotide coordinates substitutions or variants encodes a polypeptide having 3-O-sulfotransferase activity.~~

62. (Currently Amended) The isolated nucleic acid of claim 61, wherein ~~the~~ said nucleic acid sequence encodes a ~~mature murine 3-OST-1 protein~~ polypeptide comprising amino acid residues 21-307 of SEQ ID NO: 4.

63. (Currently Amended) The isolated nucleic acid of claim 61, wherein ~~the~~ said nucleic acid sequence encodes a ~~mature murine 3-OST-1 protein~~ polypeptide comprising amino acid residues 21-311 of SEQ ID NO: 2.

64. (Currently Amended) The isolated nucleic acid of claim 61, wherein ~~the~~ said nucleic acid molecule comprises [the]a nucleotide sequence as set forth in [of] SEQ ID NO: 1.

65. Cancelled.

66. (Currently amended) The isolated nucleic acid of claim 61, wherein ~~[[the]]~~ said nucleic acid ~~comprises a nucleotide~~ sequence ~~encodes~~ ~~[[ing]]~~ a polypeptide comprising amino acid residues 21-307 of SEQ ID NO: 2.

APPLICANT(S): Rosenberg, et al.  
SERIAL NO.: 09/557,262  
FILED: April 24, 2000  
Page 3

67. (Currently amended) The isolated nucleic acid of claim 61, wherein [[the]] said nucleic acid ~~comprises a nucleotide~~ sequence encodes~~es~~[[ing]] a polypeptide comprising amino acid residues 53-311, 21-307, or 260-269 of SEQ ID NO: 2.

68. (Currently amended) The isolated nucleic acid of claim 61, wherein [[the]] said nucleic acid ~~comprises a nucleotide~~ sequence encodes~~es~~[[ing]] a polypeptide comprising amino acid residues 250-276 of SEQ ID NO: 2.

69. (Currently amended) The isolated nucleic acid of claim 61, wherein [[the]] said nucleic acid comprises the nucleotide sequence of SEQ ID NO: 3.

70. (Currently amended) The isolated nucleic acid of claim 82, wherein [[the]] said nucleic acid ~~sequence comprises the nucleotide sequence~~ encodes~~es~~[[ing]] amino acid residues 21-303, 49-307 or 246-272 of SEQ ID NO: 4.

71-72. Cancelled.

73. (Currently amended) An isolated host cell ~~transformed with~~ comprising a nucleic acid of ~~any one of claim~~[[s 61-72]] 61, or 80 77-89, or a descendant thereof.

74. (Currently amended) The isolated host cell of claim 73, wherein [[the]] said host cell is selected from the group consisting of bacterial cells, yeast cells and insect cells.

75. (Currently amended) The isolated host cell of claim 73, wherein [[the]] said cell is a mammalian cell.

76. (Currently amended) The isolated host cell of claim 73, wherein [[the]] said cell is selected from the group consisting of COS-7 cells, CHO cells, murine primary cardiac microvascular endothelial cells, murine mast cell line C57.1, human primary endothelial cells of umbilical vein, F9 embryonal carcinoma cells, rat fat pad endothelial cells, and L cells.

APPLICANT(S): Rosenberg, et al.  
SERIAL NO.: 09/557,262  
FILED: April 24, 2000  
Page 4

77. Cancelled.

78. (Currently Amended) An isolated nucleic acid molecule comprising a nucleic acid sequence ~~that encodes~~ encoding a polypeptide with an amino acid sequence as set forth in ~~[[of]] SEQ ID NO: 2, or polypeptide variant thereof, wherein the polypeptide variant has 3-O-sulfotransferase activity.~~

79. Cancelled.

80. (Currently Amended) An isolated nucleic acid ~~sequence~~molecule comprising a nucleic acid sequence ~~that encodes~~ encoding a polypeptide comprising amino acid residues 53-311 of ~~SEQ ID NO: 2, or polypeptide variant a fragment thereof, wherein the polypeptide variant has 3-O-sulfotransferase activity.~~

81. Cancelled.

82. (Currently Amended) An isolated nucleic acid molecule, with a nucleic acid sequence comprising nucleotide coordinates 119-1039 of SEQ ID NO: 3, ~~or substitutions or variants thereof, wherein the nucleotide sequence substitutions or variants encodes a polypeptide having 3-O-sulfotransferase activity.~~

83. (Currently Amended) The isolated nucleic acid of claim 82, wherein ~~[[the]]~~said nucleic acid sequence comprises ~~the nucleotide~~ a sequence as set forth in ~~[[of]]~~ SEQ ID NO: 3.

84. (Currently Amended) An isolated nucleic acid ~~molecule~~sequence comprising a nucleic acid sequence that encodes amino acid residues 49-307 of SEQ IS NO: 4, ~~or polypeptide variant thereof, wherein the polypeptide variant has 3-O-sulfotransferase activity.~~

85. Cancelled.

APPLICANT(S): Rosenberg, et al.  
SERIAL NO.: 09/557,262  
FILED: April 24, 2000  
Page 5

86. (Currently Amended) The isolated nucleic acid of claim 85, wherein ~~[[the]]~~said nucleic acid sequence has at least 85 % nucleotide sequence identity with nucleotides 119 to 1039 of SEQ ID NO: 3.

87. (Currently Amended) An isolated nucleic acid comprising a nucleic acid sequence that encodes a polypeptide with an amino acid sequence as set forth in ~~[[of]]~~ SEQ ID NO: 4, ~~or polypeptide variant thereof, wherein the polypeptide variant has 3-O-sulfotransferase activity.~~

88. Cancelled.

89. Cancelled.

90. (Currently Amended) A vector comprising the isolated nucleic acid ~~sequence of any one~~ of claim 61, 78, 80, 81, 82, 84, 86, 87 or 89.

91. (Currently Amended) A host cell comprising the vector of claim 90.